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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,743	12/18/2000	Sehat Sutardja	MP0020	1406

23624 7590 04/02/2004

MARVELL SEMICONDUCTOR, INC.
INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER

PHU, PHUONG M

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 04/02/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/737,743

Applicant(s)

SUTARDJA, SEHAT

Examiner

Phuong Phu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 17-27, 34-39, 44, 46, 48, 50, 51, 54, 55, 58 and 59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 17-27, 34-39, 44, 46, 48, 50, 51, 54, 55, 58 and 59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.6.12.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Applicant's Election filed on 3/12/04.

Accordingly, group I: claims 1-10, 17-27, 34-39, 44, 46, 48, 50, 51, 54, 55, 58 and 59 have been selected.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the mailing address of each inventor. A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 17-27, 54 and 55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites the limitation "subtracting means for the high pass filtered replication signal from the transmitted and received signal" from lines 8 and 9. It is unclear what function(s) or operation(s) of the "subtracting means" does upon the "high pass filtered replication signal" and the "transmitted and received signal". It appears that the limitation

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should be --subtracting means for **subtracting** the high pass filtered replication signal from the transmitted and received signal--.

Dependent claims of claim 17 are therefore also rejected.

5. Claims 2-5, 6, 8-10, 18-23, 26, 27, 34, 36-39, 50, 51, 54, 55, 58 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural/functional cooperative relationships of elements, such omission amounting to a gap between the necessary structural/functional connections. See MPEP § 2172.01.

Claim 2 recites the limitations "said hybrid comprises an isolation transformer". The claim omits the functional/connectional interrelationships of the isolation transformer with other component(s) in the claim, (e.g., hybrid, near end transmitter, near end receiver, etc.) for making the claimed communication circuit as a complete connective and operative system.

Claims 3, 5, 6, 8-10, 18, 19, 21, 22, 26, 27, 36, 37, 38, 50, 51, 54, 55, 58, and 59 are rejected with similar reason set forth for claim 2.

Claim 4 recites the limitation "said near end replication transmitter is adjustable". The claim omits which function(s) of the near end replication transmitter is adjustable and how the adjustability of these function(s) affects functionally or connectively on other component(s) in the claim for making the claimed communication circuit as a complete connective and operative system.

Claim 20 is rejected with similar reason set forth for claim 4.

Claims (if any) dependent on above claims are therefore also rejected.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3, 7, 17-19, 24, 35, 36, 39, 44, 46, 48, 55 and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Agazzi (4,999,830).

As per claims 1, 17, 35, 44, 46 and 48, see figures 1, 2 and 4, and col. 2, line 55 to col. 8, line 54, Agazzi discloses a method and an associated system (figure 1) comprising:

- a near end circuit at one end of a communication line (130) wherein the near end circuit comprises:

transmitting step/means having a near end transmitter (104-1, 105-1, 107-1);

a hybrid (125-1) having an input in communication with an output of said near end transmitter;

combining step/means (107-1, 125-1) (see figure 2) for combining a transmitted signal with a received signal;

generating step/means having a near end replication transmitter (101-1, 103-1);

filtering step/means having a filter (201, 205) (see figure 2) responsive to said near end transmitter;

subtracting step/means having a subtractor (210) (see figure 2) to subtract an output from said filter from an output ($s_a(t)$) from said near end transmitter and an output of said hybrid, and

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receiving step/means having a near end receiver (115-1) responsive to an output of said subtractor (see figure 1 and 2); and

- a far end circuit which is located at the other end of the communication line (130), and has its structure similar to the near end circuit wherein the near end circuit and far end circuit transmit and receive signals to/from each other through the communication line (130).

As per claims 2 and 18, Agazzi discloses that said hybrid comprises a transformer (125-1) (see figure 1);

As per claims 3 and 19, Agazzi discloses that said hybrid comprises a circuit (125-1) (see figure 1);

As per claims 7 and 24, Agazzi discloses a load (107-1) (see figure 1) in communication with said near end replication transmitter to maximize a matching between said near end transmitter and said near end replication transmitter (see figure 2 and col. 3, line 26, and col. 4, lines 26-29).

As per claims 36, 55 and 58, Agazzi discloses a multiplying step/means (435) (see figure 4) for multiplying, namely, up-sampling, the sample rate of an output of said replication transmitting means (see figure 4, and col. 8, lines 7-9).

As per claim 39, Agazzi discloses that said near end replication transmitter maximizes an amplitude matching between said near end transmitter and said near end replication transmitter (see figure 2 and col. 4, lines 26-29).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4-6, 20-23, 34 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agazzi.

As per claims 4 and 20, Agazzi does not disclose that said near end replication transmitter is adjustable. However, using adjustable (adaptive) devices such as adaptive filters and/or adaptive amplifier in a system for enhancing signals being processed in the system is well-known in the art, and the examiner takes Official Notice. Therefore, for an application, it would have been obvious at the time the invention was made that one skilled in the art could implement Agazzi near end replication transmitter with adjustable (adaptive) devices such as adaptive filters and/or adaptive amplifier for enhancing signals being processed in said near end replication transmitter.

As per claims 5, 6, 21 and 22, Agazzi discloses that said near end replication transmitter comprises device (101-1, 103-1) in communication with a load (100-1) for generating signals (inherently having current values) outputted from means (101-1, 103-1) (see figure 1).

As per claims 23 and 34, Agazzi discloses that said near end replication transmitter maximizes an amplitude matching between said near end transmitter and said near end replication transmitter (see figure 2 and col. 4, lines 26-29).

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As per claim 51, Agazzi does not disclose that said near end replication transmitter comprises a voltage multiplier. However, using amplifiers in a system to amplify or multiply voltage of signals being processed in the system for enhancing these signals is well-known in the art, and the examiner takes Official Notice. Therefore, for an application, it would have been obvious at the time the invention was made that one skilled in the art could implement Agazzi near end replication transmitter with amplifiers for enhancing signals being processed in said near end replication transmitter.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 703-308-0158. The examiner can normally be reached on M-F (8:30-6:00) First Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 703-306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuong Phu
Primary Examiner
Art Unit 2631

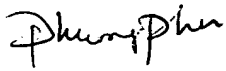
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Phuong Phu

03/24/04



**PHUONG PHU
PRIMARY EXAMINER**